

— THE ROSWELL INCIDENT — Fragments of Evidence

Analysis of metal pieces, supposedly retrieved from a UFO crash near Roswell, confirms that their purity and composition are unknown to modern science.

by Linda Moulton Howe ©1997

LMH Productions
PO Box 300
Jamison, PA 18929-0300, USA
Telephone: (215) 491 9840
Fax: +1 (215) 491 9842
E-mail: LMH333@AOL.com

SURPRISING STATEMENTS FROM AN ANONYMOUS SOURCE

I have been reporting news about science, the environment and unexplained phenomena on the nationally syndicated radio program, "Dreamland with Art Bell", since 1993. In the spring of 1996, host Art Bell received a letter, dated 10 April 1996, with a South Carolina postmark, that was signed only "A Friend" [see *Twilight Zone*, NEXUS 3/04]. The letter began:

I've followed your broadcasts over the last year or so and have been considering whether or not to share with you and your listeners some information related to the Roswell UFO crash...

The writer did not give a specific UFO crash date or location and still has not provided those specific details as of January 1997, even though Bell and I have repeatedly asked on the air for those facts. Different testimonies about UFO crashes near Roswell in different locations and different time periods have now confused the story, so we do not know if the anonymous writer means the now-famous incident of the first week of July 1947 on the Foster Ranch between Corona and Roswell, or another incident.

One surprising detail from the South Carolina source was his statement that his grandfather kept a journal and had described the crashed vehicle as "wedge-shaped" like a piece of pie, not shaped like a round disc. However, in the letters we received from this source, he referred to a "disc" perhaps because "disc" is becoming a generic term for UFOs regardless of shape. (Note, too, that any inconsistencies in word capitalisations are reproduced exactly as the source wrote them.) The first letter continued thus:

My grandfather was a member of the Retrieval Team sent to the crash site just after the incident was reported. He died in 1974, but not before he had sat down with some of us and talked about the incident.

I am currently serving in the [United States] military and hold a security clearance and do not wish to 'go public' and risk losing my career and commission.

Nonetheless, I would like to briefly tell you what my own grandfather told me about Roswell. In fact, I enclose for your safekeeping 'samples' that were in the possession of my grandfather until he died, and which I have had since his own estate was settled. As I understand it, they came from the UFO debris and were among a large batch subsequently sent to Wright-Patterson AFB in Ohio from New Mexico...

ANALYSIS OF 'UFO' METAL SAMPLES

In the package were many metal pieces in a variety of sizes ranging from one-quarter-inch squares, to a ten-inch-long by one-and-a-half-inch-wide thin strip, to one round piece nearly three inches in diameter and covered with circular grooves. There was also a series of small, connected rectangular "vents" in which the slits alternated in opposite directions from one rectangle to another (see Plate 1).

Art Bell contacted me about how to study the metal pieces, and I in turn contacted a university professor who has become a research colleague. This professor has access to a scanning electron microscope and to energy and wavelength dispersive spectroscopic instruments which can precisely determine the elemental composition of metals and photograph structure down to fractions of microns. Those tests confirmed that the metal pieces were nearly pure aluminum (aluminium).

After I reported the energy dispersive spectroscopy (EDS) findings on the radio, we received a second letter (dated 22 April 1996) from the anonymous South Carolina source, further detailing the make-up of the retrieval team as "On-site", "In-House" and

"Security". The team members were listed as:

...individuals with backgrounds from the University of Colorado, Office of Naval Research, AAF/USAF & US Army, UCLA [University of California, Los Angeles], Atomic Energy Commission, National Advisory Committee on Aeronautics, and Office of Scientific Research and Development. Additionally, there were consultants from England, France and Russia involved. [Note: Army Air Force was splitting into Air Force and Army during the summer of 1947.]

The anonymous writer continued with his recollections of what his grandfather had told him:

Grandad stated their own analysis of the samples indicated it as pure extract aluminum as a conductor for the electro-magnetic fields created in the propulsion systems. However, critically needed data was 'eliminated' by the self-destruct mechanisms on the disc vehicle itself. Furthermore, the occupant-survivor of the crash refused to disclose technical information despite a series of interrogative attempts to extract technological data. No means could be found to secure the information.

There were always two Security Team members present at every face-to-face meeting with the survivor. The survivor had the ability to deduce thoughts and questions prior to them being asked. Sometimes it became frustrating.

The Disc itself was literally dissected, and it was discovered that the propulsion system had actually fused together the many interior components. There were control-type devices forged in the shape of the alien hand, which were assumed as controls and activation surfaces.

What is today fiber-optic technology was part and parcel of the alien technology within the control panels, albeit fused and melted when the self-destruct mechanism was activated. There were Westinghouse-affiliated persons on the Team and Grandad always thought some of them had gone back with the knowledge and incorporated it into the future research with the phone systems.



Plate 1: Metal pieces sent by anonymous South Carolina source with his first letter of 10 April 1996, allegedly from a wedge-shaped craft that crashed somewhere near Roswell, New Mexico in the 1940s. Specific date and location were not given. Metal analyses showed that the pieces were more than 99% pure aluminum and normal density. Photograph by Art Bell ©1996.

Of course the military was concerned as to the ability of the Aliens to enter our atmosphere at will, undetected, and thusly they recommended to the President that a Space Program be set into motion and that a system of satellites be placed into orbit by 1957, and this satellite system be patched into the then DEW Line system [Distant Early Warning radar stations at 70th parallel across North America] which became later NORAD [North American Radar Defense]. Grandad stated that it was his opinion that NORAD was formed not only to track possible ICBMs from hostile nations, but as an established detection system for UFO craft...

The reference to an alien "survivor" and "control-type devices forged in the shape of the alien hand" provoked me to wonder if this incident had something to do with the controversial "alien autopsy" film excerpted in England and United States television productions on 28 September 1995.

I continued to report interviews with Alcoa aluminum metals experts and others about the possibility that the aluminum pieces might be 'punch-outs' from terrestrial machining operations, or might have been punched out of actual non-terrestrial metallic sections of the alleged craft for scientific study. The Alcoa experts were not certain, but agreed that the purity of the aluminum was not typical of normal industrial aluminum machining.

TESTS ON MULTI-LAYERED METAL PIECES

Then, on 27 May 1996, a third letter together with another metals shipment was received by Art Bell. The entire letter reads as follows:

Dear Mr Bell,

I have listened with interest to the ongoing reports on the samples I sent your way. I noted that the Researcher [Linda Moulton Howe] discussing the testing of the samples noted that basically it is merely Aluminum. Slight variations on the testing, but indistinguishable from 'normal' Aluminum.

Actually this is precisely the same initial findings of Grandad's Team. However, I neglected to include metallic samples of the exterior of the crashed Roswell disc. I now include the enclosed, and can only say that these scrapings came from the exterior underside of the Disc itself. It literally was a 'shell-like' shielding of the Disc. Brittle and layered, almost with a pre-fabricated design and placing.

Keep in mind, Mr Bell, that these are the last of Grandad's samples. They have sat for years inside a closet with his personal effects.

Because of certain concerns, I will not be contacting you on this matter. Perhaps, I am a bit paranoid, but I do have a family & career to think about. I hope you understand. Hope these last samples are helpful. Of course, I will be listening.

A Friend

Art Bell immediately contacted me and said there were half a dozen pieces about two inches long, about an inch wide and averaging a quarter of an inch in thickness. One side of each piece was dark and the

other side was a shiny silver. I contacted the professor who agreed to analyse the new pieces, so Bell shipped two of the pieces to him, keeping the others in a safe-deposit box.

The first step by the professor was to photograph the metal pieces as they arrived at his lab. To give colour and size perspective, he put the dark side of one piece up on the left and the silver side of the other piece up on the right, both near a quarter coin, about an inch in diameter, for size comparison (see Plate 2).

On 8 June 1996 the university professor released his preliminary analyses of the metal pieces. He had examined a cut-and-polished cross-section with a scanning electron microscope to look at structure, and EDS to determine element composition.

The professor wrote:

These were very different from the aluminum specimens received earlier. The material was in two main pieces, referred to as "skins".

Sample One was approximately six centimeters by three centimeters and about three to four millimeters in thickness. Sample Two was about five centimeters by two and a half centimeters and again three to four millimeters thickness. Sample One weighed 6.23 grams. Sample Two weighed 6.9 grams. The shape of each sample was quite irregular, and the thickness in each case varied in different areas. It is emphasized that these measurements are meant to provide only some notion of the general size of the specimens.

Each sample had a 'silvery', shiny side with a rough (granular) appearance. The other side was blackish-gray. Looking at the samples edge-on, numerous layers can be seen. The samples were hard but brittle, and a few small pieces could be broken off using a small hand vice and manual pressure. ...Energy dispersive spectroscopy (EDS) revealed that the shiny side contained more than 95% magnesium (Mg) and a small amount (2-3%) of zinc (Zn). The dark side contained a significant amount of bismuth (Bi).

...the material appears to represent layers of a substance consisting mainly of magnesium and a small amount of zinc separated by thin layers containing a high bismuth content.

On 23 July 1996 the professor released another more refined test report after applying Wavelength Dispersive Spectroscopy (WDS) to analyse the element composition of the metal skin. In his conclusion he wrote:

The WDS confirms more quantitatively the previous EDS measurements. The material corresponds to layers of Bi and Mg/Zn with the weight percent of the Zn varying slightly from about 2.4% to 2.9% between Bi layers. In addition, no zirconium (Zr) could be detected with the Mg/Zn area. (That search was because zirconium (Zr) is frequently found in Mg/Zn alloys.)

There were questions about the isotope ratios in the magnesium which the universi-

ty professor did not have the technical equipment to analyse. "Isotope" refers to the number of protons and neutrons in the nucleus of each atom. On Earth, magnesium (Mg) metal is made up of about 80% ²⁴Mg and about 10% each of ²⁵Mg (one additional neutron compared to ²⁴Mg) and ²⁶Mg (two additional neutrons compared to ²⁴Mg). If the metal were truly extraterrestrial in origin, one would wonder if anomalies might be detected at the magnesium isotope level that would prove the metal was highly strange.

For example, in 1957 a metal fragment allegedly from a UFO that exploded off Ubatuba near São Paulo, Brazil, was analysed by the Brazilian government in laboratory tests.

On 14 September 1957, eyewitnesses had seen a "flying disc" approach them at fantastic speed and pull up to avoid striking the water; then it exploded into thousands of fiery fragments which fell into the sea.

A number of pieces fell near the beach and some were recovered. A witness sent three small fragments in a letter to an investigator who eventually got them to the Mineral Production Laboratory, a division of the National Department of Mineral

Production in Brazil's Ministry of Agriculture.

The metal tested to be nearly 100% pure magnesium, entirely without the metallic trace elements characteristic of Earth-manufactured magnesium. Another strange result was that the metal was 6.7% heavier than ordinary pure magnesium.

Former NASA scientist Paul Hill, who later summarised the results of the lab analyses done on the Brazilian fragments, suspected that if there were more of the isotope ²⁶Mg, it could explain the density difference. In fact, his computations would explain the density anomaly if the metal was the pure isotope ²⁶Mg.

So I arranged to have a piece of the "skin" from the alleged

The metal tested to be nearly 100% pure magnesium, entirely without the metallic trace elements characteristic of Earth-manufactured magnesium.



Plate 2: Photograph of two metal pieces from second shipment by anonymous South Carolina source. Each piece had a dark side and a shiny silver side. On the left, the dark side is up; on the right, the silver side is up. An inch-diameter quarter coin was placed next to the pieces for size comparison. Photograph by university professor ©1996.

Roswell crash examined on 20 July 1996 at the Carnegie Institute in Washington, DC. A sophisticated ion microprobe instrument was used which could analyse magnesium isotopes.

It was the third confirmation that there were only three elements in the skin: bismuth, zinc and a bit more of the isotope ^{26}Mg than in the control sample of magnesium, but not outside normal terrestrial ranges for normal magnesium metals. The most striking anomaly was that the bismuth/magnesium layered material emitted 60 times more positive ions than the pure magnesium metal being used for standard comparison (see Plate 3). Ion microprobe analyst Erik Hauri wrote in his formal report:

The Bi-Mg sample gave count rates of Mg+ ions which were enhanced sixty times more than [the Mg+ ion count] in the pure Mg metal standard [used for control].

Hauri suggested three possible reasons for the difference. First, he explained that the zinc might act as a catalyst for magnesium ionisation. Second, that catalytic process might be enhanced if there were a distinctive arrangement in the Mg crystal structure which related to how the material was originally constructed. Third, if oxygen were somewhere in the sample it could enhance Mg ionisation. However, Hauri acknowledged that none of the ion microprobe spectra showed any oxygen.

By then I had reported on "Dreamland" that the unidentified metal pieces sent to us from the anonymous South Carolina source appeared to be made up of thin layers of nearly pure bismuth which alternated with thicker layers of nearly pure magnesium mixed with a little zinc. On the air, I asked if anyone listening had any information about the construction or function of such a material.

I have also contacted more than 50 people in the scientific and industrial community to see if I could find anyone who had worked with bismuth and magnesium/zinc and knew what the metals might do layered together in the alternating and varying micron thicknesses. But, to date, no one—ranging from the Director of Material Sciences at Massachusetts Institute of Technology (MIT) in Cambridge, Massachusetts, to metallurgists

at Sandia National Laboratory in Albuquerque, New Mexico, to exotic metals manufacturers and other university specialists—has any knowledge of layering these metals in alternating layers in which bismuth is about one to four microns thick and magnesium/zinc is about 100 to 200 microns thick.

ANTI-GRAVITY CHARACTERISTICS OF METAL "SKIN"?

Speculation about what this layered metal material might do has included resisting or detecting magnetic fields, because bismuth has the greatest Hall effect and is the most diamagnetic of any metal. Concerning the Hall effect, if a voltage is placed on bismuth while the metal is in a magnetic field, a current flow will be induced that is 90 degrees to the voltage. Bismuth's diamagnetism does not allow magnetic field lines to penetrate it. Bismuth also absorbs infrared energy which could be converted to electricity. One tantalising suggestion was that the bismuth/magnesium material would provide anti-gravity lift when surrounded by a strong electrostatic force combined with a radio frequency (RF) signal, a "Class C" RF signal, though no specific frequency was given.

That last suggestion came from a man who claimed to have worked at Edwards Air Force Base, California, and Area 51, Nellis AFB, Nevada, from 1973 to 1979, back-engineering technology retrieved from the Soviet Union during the Cold War. The man claimed that, during that time, layered metal with bismuth and magnesium had come into his lab as an "unknown" and left as an "unknown". He also claimed he later learnt that if the bismuth/magnesium metal were placed in a million-volt electrostatic field provided by a van de Graaff generator with an additional radio frequency (RF) signal applied, the metal would turn into a "lifting body".

Laser optical physicist Travis Taylor at the Redstone Arsenal in Huntsville, Alabama, had previously contacted me, offering to help with experimentation on the metal "skins". So I contacted him about doing the electrostatic and radio signal experiment. He agreed to try, so in September 1996 he was sent a small piece of

the skin which had been cut by the university professor from one of the bigger pieces he had analysed in his laboratory.

The first stage of the Travis Taylor experiment was at 500,000 volts without the added radio signal. To compare DC versus AC electric current, he tried both an AC Tesla coil and a DC van de Graaff apparatus. A control piece of normal aluminum was cut from a pop can to compare reactions in the field.

Taylor's videotape of this first experiment showed a dramatic movement by the bismuth/magnesium layered material. It moved sideways with such energy that it literally flipped off the plastic insulator cap that Taylor was using to separate the metal pieces from the van de Graaff generator. The aluminum control piece did not move at all.

After I reported this test, other scientists around the US called to say the experiment needed to be more refined to control for purely electrostatic effects, so we set about to do another experiment at a million volts with the RF signal added.

This time Taylor used only a DC van de

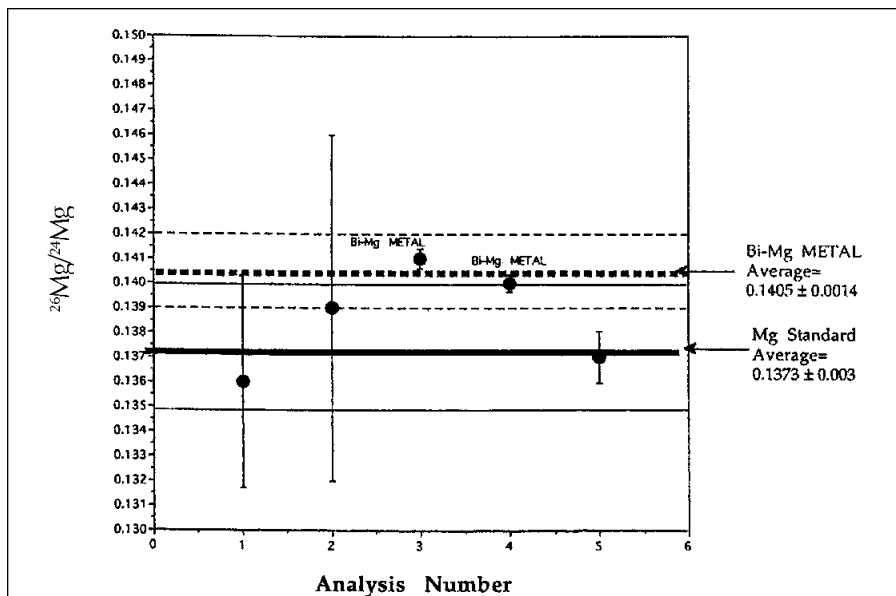


Plate 3: Ion microprobe analysis graph showing comparison of bismuth/magnesium skin average isotope range for ^{26}Mg isotope compared to a standard average for terrestrial magnesium. There was more ^{26}Mg isotope than normal, but not outside normal terrestrial magnesium ranges. Ion Microprobe analysis by Erik Hauri, Carnegie Institute, Washington, DC, 20 July 1996.

Graaff electrostatic field generator, as per the instructions of the alleged government informant. Insulation from the field in this experiment was a thin piece of paper suspended above the generator, upon which the bismuth/magnesium skin was placed. A control was made out of alternating layers of a magnesium/zinc alloy that almost perfectly matched the EDS and WDS analyses of about 97% magnesium and about 3% zinc.

When the control was placed on the suspended paper alongside the bismuth/magnesium layered metal piece in the million-volt field with 7-MHz radio frequency signal applied, the bismuth/magnesium material seemed to have a more energetic reaction *away from* the direction of the RF signal. The skin's response was to back away from the RF signal. The control piece of magnesium and zinc did not have that reaction.

This experiment was also videotaped, and neither metal moved as dramatically as in the first videotape. There might be a connection to the nuclear magnetic resonance frequency of bismuth which is about 7 MHz, the same as the RF signal. Nuclear magnetic resonance occurs at the subatomic level under certain conditions when a substance is placed in an external direct-current magnetic field.

Another scientist, Nick Reiter, who is an expert with solar cell manufacturing, agreed to try to make a bismuth and magnesium/zinc layered material in his vacuum vapour deposition apparatus in order to see if the material could be duplicated.

So far, after four tries over several months and slowing down the process to building one layer per week, he has produced a very thin material that somewhat resembles the unidentified metal "skin", but does not match. So, we still do not know precisely how the "skin" was manufactured or what it is supposed to do.

AN EXTRATERRESTRIAL EXPLANATION?

On 5 July 1996 Art Bell and I received another—and last—letter communication from the anonymous South Carolina source. The letter quoted allegedly from the deceased grandfather's journal about the layered material removed from the bottom side of a wedge-shaped vehicle near Roswell:

Sample extraction radiated light for a full (3) hours. Originally located on central underside of Wedge-shaped Disc. Speculate some type of Shielding(?) to enable Craft & Crew to survive accelerated entry into atmosphere, when Craft was experiencing uncontrolled descent. Pile of blackened ash was analysed and ash was confirmed of same elements of layering. Ash consisted of fibrous dust and residue. Ash and all debris swept into bagging. Bags placed in tagged boxes. Boxes placed into Metal Footlockers. Initial examination (off-site) conducted at New Mexico

Institute of Mining & Technology. Secondary examinations at Los Alamos Facility. Footlockers subsequently airlifted by Courier to Wright Field, Ohio.

I asked physicist Travis Taylor in Huntsville, Alabama, if he could do a worldwide literature search in scientific and military channels to see if he could find anyone who had worked with bismuth and magnesium in layers. After several weeks, he told me:

Linda, basically I have exhausted every resource that I have ever tried to use in the past from about 1940 to now and I have found no reference, even in government research, for bismuth/magnesium layers. This material didn't just make itself. It had to come from somewhere. And that's one of the things about it that excites me is because somebody had to build it and no one has reported building it. And it's a very high-tech piece of material, so if they didn't report it, why did they build it? That's what we do in science. We do some research and then we tell everyone about it. And nobody's told anyone about this material.

Travis Taylor's comments were focused on terrestrial explanations for the bismuth/magnesium layered material, such as early 1940s stealth or other exotic metals research by the United States government.

But if the layered material had been produced by a non-human technology associated with a crashed disc and alien beings in New Mexico—as the anonymous South Carolina source's letter stated—then the absence of information in the worldwide scientific

literature is not so unreasonable.

Finally, the aluminum pieces might never have had any original connection to the bismuth/magnesium material. The information from the South Carolina source could be misinformation designed as a controlled government release which distributes information and images into the public consciousness without official sanction. However, the bismuth/magnesium material, in its layered combination for whatever function, remains an unknown in the scientific and metallurgic literature to date.

One tantalising suggestion was that the bismuth/magnesium material would provide anti-gravity lift when surrounded by a strong electrostatic force combined with a radio frequency signal.

Note: If readers have any more information about the mysterious metal skin composed of alternating layers in micron thicknesses of pure bismuth and nearly pure magnesium with a little zinc, please contact Linda Moulton Howe as per details on the first page of this article.

About the Author:

Linda Moulton Howe is a graduate of Stanford University, USA, and has a Masters Degree in Communication. She has devoted her film/TV career to documentary and studio productions on science, medicine and the environment. Her documentaries, *A Strange Harvest* and *Strange Harvests 1993*, explored the worldwide animal mutilations which have been ongoing since the late 1960s. She has written several books, including *An Alien Harvest* and *Glimpses of Other Realities*, vols. I and II.

Ms Howe's investigations have taken in such diverse subjects as the crop circles phenomenon, the *chupacabras* mystery, humanity's hidden history, and the evidence for UFOs and ETs, most recently focusing her research efforts on the alleged Roswell UFO crash fragments.

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